

What is claimed is:

1. A sensor comprising:
 - a diaphragm, wherein at least on one side the diaphragm further comprises a surface which reflects a light beam;
 - a first optical waveguide being constructed on said side as a transmitting waveguide, through which a light beam passes and strikes against the diaphragm;
 - a second optical waveguide being constructed at a specific angular relationship with respect to the first optical waveguide, said second optical waveguide having the function of a receiving waveguide and into which light reflected from the diaphragm enters; and
 - optical means being constructed in the light path between said diaphragm and said receiving waveguide in such a manner that the light beam is focussed onto the end face of the receiving waveguide by said optical means.
2. The sensor according to Claim 1, wherein the sensor is a microphone.
3. The sensor according to Claim 1, wherein said means for beam focusing comprises a focusing lens system, which is melted onto the output of the transmitting waveguide.
4. The sensor according to Claim 1, wherein the focusing lens system is a glass body.
5. The sensor according to Claim 1, wherein the focusing lens system is a spherical lens, a biconvex or a planoconvex lens, a cylinder lens or a lens made from SU8.
6. The sensor according to Claim 1, wherein the focusing lens system is drop-shaped and/or has a circular cross section.